

BLM Enterprise Architecture (BEA)

Bureau of Land Management



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Architecture Governance

The BLM Enterprise Architecture (BEA) is a blueprint. Architecture governance is just a fancy way of laying out how we will follow the blueprint. It is the development of policies and procedures that we follow to ensure projects are adhering to the architecture. Not just technology (IT) projects, but all projects that are anticipated to begin this year and in the out years.

Architecture governance defines the key points in a project's life cycle where the project will be evaluated for architecture compliance. The evaluations map to the

established Select-Control-Evaluate processes that are defined by the System Coordination Group (SCO) and monitored by the ITIB. Another part of following the blueprint includes the establishment of the Technical Review Board (TRB). The TRB is an advisory group to the ITIB to ensure that IT projects are in compliance with the BEA, the Technical Reference Model, and the Bureau's IT baseline.

The purpose of evaluating projects against the architecture is to determine if business

cases fit the principles, strategies, recommendations, and models published by the BEA. The written evaluations provide usable comments to project managers and establish a track record of a project's history for the SCO. Evaluations map applications to business processes and data. By grading each project against a scoring scheme of 1 to 5 (see diagram), the ITIB will understand the implications of a project on the Bureau and can make informed decisions about recommending funding that project.

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Scoring Basis:	Score	Comments
Fully aligned with BEA recommendations	5	Proposal will promote BEA purposes
Aligned, with exceptions	4	Alignment is acceptable without revisions
Somewhat misaligned with BEA	3	Suggested changes ought to be required
Significantly misaligned with BEA	2	Proposal, without revisions, counters BEA objectives
Insufficient information to assess	1	Information required before further consideration
Disqualifying Deficiency	DD	Must be rectified prior to further consideration

BLM Develops a Technical Review Board (TRB)

The Federal CIO Council's Architecture Guidance recommends federal agencies establish Technical Review Boards that provide oversight for their agency's IT Architecture (ITA). For the BLM TRB, their main role will be to facilitate collaboration of our ITA by leveraging in-house experience and expertise in Technical Reference Model (TRM) updates. The work being accomplished by the TRB will be done mainly through Board appointed Technical Advisory Groups (TAGs).

As the BLM's IT Architecture evolves, there may be differences of opinions in the direction our IT Architecture will take. The Board, with input by representative TAGs, will be able to facilitate and arbitrate resolutions to these differences. The result will be a TRM that will better meet the needs of our IT staffs and business proponents.

The TRB will also be the main link of technical advise and guidance to the ITIB for national information systems and technology implementation. The ITIB, as the BLM's approval point for IT investments, will rely on

recommendations from the TRB as to the benefit of new technologies in meeting the business needs of the Bureau.

The TRB will be co-chaired by the BLM Lead Architect and one CIO Council. Bureau representatives will also serve on the TRB and will include business owners, senior architecture consultants, and representatives from the Bureau's business, technical, and user community. The draft TRB Charter can be reviewed at <http://web.blm.gov/bea/>.

Records Management and the BEA

Records management is one of those things that everyone does every day, but few are aware of importance records management. Records are at the core of everything we do in BLM. Records management is intrinsically part of the BEA and as we begin to implement Version 2 of the target architecture, the ever-broadening role of records will be obvious to even the casual observer.

Records management must be incorporated into each layer of the BEA Process and data models that have already been developed as part of the architecture will be reviewed to ensure that all official records that are part of a business process output are captured accurately. The data architecture layer will also be analyzed for

data classes and elements that result for process that create or impact official records. The target architecture will integrate records management applications as part of the Applications Systems Development Environment.

At the technology layer, records management standards and compliant products will be emphasized to ensure appropriate technology components are used to capture official records as they are being developed. Database systems will require the implementation of records management functionality within each application. This is a complex task within systems, such as GIS systems, that are both document and database driven. National Archives has offered to work with BLM to provide

targeted assistance in the area of GIS systems.

Records management systems and processes are key to ensuring that the BLM is meeting legal and regulatory requirements for adequate and proper documentation. Such documentation, retained as records, must provide complete and accurate documentation of the conduct of Government business and to protect the legal and financial rights of the government and of persons directly affected by the agency's activities

The target architecture is laying the foundation for moving the BLM forward in all areas of records administration.



One Area of Focus—DATA!

In FY 2001, the BEA created a firm foundation for understanding how we use data in the BLM by completing an Enterprise “CRUD” (“Create-Read-Update-Delete”) analysis that identifies what BLM programs originate, use, and share the same corporate information. During the next fiscal year, the BEA will focus even more on streamlining how we all use BLM’s corporate data resources. Version 2 of the Enterprise Architecture Report identifies practical strategies for data standardization and for improving data quality. Specific business programs, such as oil and gas leasing and land use planning, are highlighted as good candidates for partnering. Over the next several months, the BEA will be looking at data we use BLM-wide, and will help the business programs exploit opportunities for data standardization.

The BEA is working closely with the Bureau’s Data Management Project (DMP), which is sponsored by Mr. Henri Bisson, AD for Renewable Resources and Planning. The DMP is creating BLM-wide policies, procedures, methods, and tools to help the business programs manage all spatial and alphanumeric corporate data at lower cost. The new BEA data management initiatives will support the Bureau Data Administrator in his efforts to see these DMP products implemented by the business programs. Through this implementation and facilitation, the lessons-learned in these efforts will be incorporated into successive versions of the DMP products. (Version 2 of the Data Management

Plan may be found at http://web.blm.gov/internal/wo-500/Data_Mgt.html.)

Integrating significant changes in the way data is managed and shared in BLM will require more than new procedures, however. Implementation will require changes in software applications and the technology architecture of BLM, consistent with the Technical Reference Model. To this end, the BEA is recommending that multiple Enterprise Information Data Stores (EIDS) be developed. The EIDS, which can be thought of as a framework for achieving consistency and quality across many BLM data bases, when applied to each business program will simplify implementation of standards and sharing of common data elements among the various business programs. Because it takes time to add quality to data, we can expect that implementation of the EIDS will occur piece by piece, with each piece representing a different data subject area. In this architecture, not all the data in a particular data subject area has to be populated in the EIDS at a single time. For example, if a decision is made to focus attention on developing the Right-of-Way (ROW) component, initially the EIDS only needs to be populated with the data in the “Rights” data subject area germane to ROW. Similarly, the Legal Entity component would address business needs to standardize data and business rules for what is

commonly called “Name and Address”, the EIDS would be populated with data germane to the data subject areas supporting Legal Entity. An essential ingredient in this approach is that implementation can evolve at the speed that BLM chooses, the EIDSs will grow as data for the data subject areas are migrated to the EIDS in a priority order established by business requirements. The EIDS will also provide a roadmap for making the data in many physically-separate BLM data bases consistent, reliable, and fully shareable by all who need the information, inside and outside the agency. This will permit us to gain the advantages of standardization where it is needed, while leaving the physical management of data bases in the location that makes most sense to the business programs.

In support of the EIDS, the BEA is recommending completion of the Enterprise Logical Information Model (ELIM). This model provides an architectural blueprint of BLM data relationships that all new applications and data bases will consult, thus promoting standardization, sharing, and reuse. By acting before new systems are designed, the benefits and cost savings can be achieved more rapidly and with the least potential for disruption.



Ongoing Communications Efforts

The BEA web site has been completely overhauled. The layout of the page has been streamlined, but all historical documents, links, and information can still be accessed from the homepage from the pull down menu or via the search function. Please take a look at our revised site and let us know what you think! The site can be reached at <http://web.blm.gov/bea/>.

Once you begin looking through the web site you will notice that each page has the same look and feel, very similar in layout and format as this newsletter! We did that on purpose to help you find your way through the volumes of information we have provided you within our site. If you need any help in locating information on our web page, or if you would like more information about this newsletter, please contact Ruth Welch at ruth_welch@blm.gov.

Other new initiatives underway include briefings for our executive teams and our leaders in Washington. Chris Hamilton, Business Architecture Team Lead, and Colleen Coggins, Bureau Lead Architect, are in the throws of briefings to the ITIB, Field Committee, and the Assistant Directors and their staffs on the soon to be released Target Architecture report. The report, and the corresponding presentations, are available on our web site at <http://web.blm.gov/bea/presentations.htm>. In addition, members of the Business Architecture Team will be providing similar presentations to their State management teams over the next few months. These presentations will also be posted on our web site as they become available.

Enterprise Architecture Investments

BEA Points of Contact

Over-arching BEA questions:

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The EAI is the near and long term IT investment planning required to substantially maneuver the Bureau of Land Management's (BLM's) existing "as is" infrastructure and its future, business-driven infrastructure. This effort will define BLM's existing baseline infrastructure, assess the cumulative impact of planned IT projects on BLM's existing architecture, determine annualized infrastructure replacements/upgrades/additions, and define resulting migration and annual enterprise implementation plans. The TRM documents, although substantive in identifying the standards and technologies that BLM will embrace over the next five years, does not provide a systematic method for transitioning the Bureau in the implementation of these technologies. These EAI implementation plans will provide input to the IT Capital Acquisition Fund (ITCAF) in FY 2003 and beyond.

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Once the target technical architecture is completed for the current fiscal year, transition plans will be developed by the EAI team that will support IT proposals and business cases for the subsequent fiscal year. The transition plans will contain information on the proposed target technical architecture, detailed costing information on the anticipated IT products, training, implementation and long-term O & M costs. The plans also will include a business case to explain why an EAI approach will benefit the Bureau in migrating to the purposed target technical architecture.